

# FEATURE

*A monthly features service on scientific, technical, and educational subjects pertinent to development.*

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## AFTER 7000 YEARS BAMBOO

### GETS ITS DUE

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with IDRC staff

Bamboo may well be the most versatile plant known to man. It is used for everything from food to furniture, from blinds to boats. It is estimated that at least one-third of the world's people depend on it for some aspect of their daily lives -- most of them in Asia.

Perhaps nowhere is the importance of bamboo better seen than in China's sub-tropical and temperate zones south of the Yangtze River. About 250 species of bamboo grow here, and the plant is known as "the money tree" because production of bamboo articles has long been a remunerative sideline occupation among the people of the river valleys.

Taojiang county, in Hunan province, is called the land of nanzhu, one of the largest species of bamboo. It is difficult to know what the local villagers would do without it. They use it for the framework of their houses, they shade their doors and windows with bamboo blinds, conduct water through bamboo pipes and propel their boats with bamboo poles.

They sleep on mats made of woven bamboo and sit on bamboo chairs. Many of their kitchen utensils are made of bamboo. They prize succulent bamboo shoots, cut when they are about 15 centimetres long, as a delicacy and eat them with chopsticks -- made of bamboo, naturally.

The people use bamboo to make rice baskets, shoulder carrying-poles, shovel handles and many other farm implements. When it rains they use bamboo cloaks as raincoats and in the summer they get relief from the sun under bamboo sun helmets.

Taojiang county, with 100,000 peasant households, has 34,000 hectares of bamboo groves and fells more than six million lengths of bamboo timber every year. One-third of the timber is sold to the state, and the rest is processed at 60 bamboo-ware workshops set up by local rural communes.

In the bamboo mat workshop in Guanshan village, workers first cut the woody bamboo stems into sections which are split again and then steamed and made into paper-thin strips. The villagers, mainly women, take the strips home to weave them, and the workshop pays them according to the quantity and quality of their products. Every family in the county plaits bamboo wares under contract to the workshops. An average family's earnings equal several hundred dollars a year. The 19 handicapped persons in the village who once lived on relief from the commune because they could not work in the fields, now have jobs in the workshops.

The parts of the bamboo timber not used in mat-making are sent to another workshop to be made into baskets, dustpans, brooms and some other articles. Even the chips are not wasted. They are whittled into smaller items like tooth picks and popsicle sticks.

Taojiang county also has bigger bamboo arts and crafts workshops where professional craftsmen have elevated bamboo work to a fine art. They can make bamboo curtains as thin as cloth by interweaving silk thread with bamboo strips nearly as fine as thread and laquered baskets so closely woven that they can hold water. The products are sold in many cities in China and exported to Japan, the United States, Southeast Asia and West Europe.

Bamboo grows best in damp and warm hilly areas. In spring, when it drizzles for days on end, a bamboo plant can grow several dozen centimeters a day. Under these conditions, one hectare of bamboo plantation will yield 26 tons of bamboo wood every year.

The cultivation of bamboo has a long history. Bamboo joints were found in the 7,000-year-old runs of the settlements of a primitive tribe at Yuyao county, Zhejiang province, east China.

The earliest books in China were called "jian zi," meaning bundles of bamboo strips, strung together with silk cords or strips of cowhide. The longest strips measured about 75 centimetres.

More than 1,000 well-preserved "jian zi" were found in the 1970s in three 2,100-year-old tombs at Mawangdui on the outskirts of Changsha city, Hunan province. The bamboo baskets, fans, musical instruments, and utensils also found in the tomb are very similar to the bamboo wares still made in China.

Today many modern paper mills in China beat the inside portions of bamboo stems into a pulp and use it to manufacture finer types of industrial and art paper. Bamboo is also extensively used in construction in China. A compound of plastics and compressed bamboo is used to make boards, pipes and other structural materials for use in architecture and engineering.

Bamboo is equally widely used elsewhere in Asia. In India, for example, bamboo covers at least 9.5 million hectares, and commercial bamboo production accounts for 20 percent of the country's wood production. In Thailand, where bamboo shoots are an important daily food for the rural people, almost half the known species of the plant may be found, growing wild and cultivated. And in Malaysia the manufacture of bamboo incense sticks has become a million-dollar export industry.

In spite of all this, the bamboo has received very little attention from modern agricultural research. In fact it was not until 1980 that the first international meeting of research scientists interested in bamboo took place. Sponsored by the International Union of Forestry Research Organizations and Canada's International Development Research Centre, the three-day meeting produced the most complete review yet on the state of bamboo research in Asia.

The scientists from 13 countries also produced a list of research priorities, proposed a programme of cooperative activities and information exchange, and agreed to meet again in September this year. In future bamboo will begin to receive the share of attention that is merited by its social and economic importance.

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